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ABSTRACT

To become an efficient reader of subject matter in geography, students need to have adequate background information to read the ensuing content. Vocabulary considerations thoroughly enter into the reading act. A major problem for the teacher when students read geographical content is to develop meaning. To assist students in reading and understanding complex geographical concepts, teachers can: assist students to use context clues; help learners with the initial consonant sound and then using context clues; dividing the unknown word into syllables; saying the correct word to the stalled reader; using peer reading; emphasizing peer teaching; and having students read aloud the subject matter. Actual objects, models, and pictures need to be used in teaching geography. They assist students to make sense out of the abstract words read as well as those used in discussions. Teachers need to pay attention to learning styles possessed by individual students. Some students may prefer increased direction in learning as compared to others. Learning approaches should be varied so that the learner who does prefer to work alone has the opportunities to work with others, and those who prefer to work with others should work individually on learning tasks. Meaningful reading needs to be stressed in the understanding of the five fundamental themes in geography: location, place, human-environmental system, movement, and regions. (Contains 11 references.) (RS)

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Reading in the Geography Curriculum.

by Marlow Ediger

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READING IN THE GEOGRAPHY CURRICULUM

Reading across the curriculum is highly important since pupils are to learn to read well in all academic disciplines such as being emphasized in state mandated testing, in the school setting, and at the future work place. For example, in high stakes testing at the state level, a pupil may be denied a high school diploma if he/she does not read at an accepted level of achievement. In the school setting, ambitious goals in reading achievement have been announced in that all pupils are to read on the third grade level by the end of the third grade. If high stakes testing is extended to the primary grade levels, a pupil may not advance to the next grade level unless he/she reads on grade level. At the work place, workers face low paying, dead end jobs if they do not read at a level commensurate with the tasks at hand.

This paper will focus on reading in geography. The author taught on the West Bank of the Jordan, in the Middle East for two years. Several courses taught emphasized geography, as a separate academic discipline, for the entire school year. In the Unites States, the author also taught geography as a separate subject and then as integrated into the social studies. Geography has its very own vocabulary as well as terms which are common to several academic fields (Ediger, 1995, p. 8).

Reading in Geography and Vocabulary Development

To become an efficient reader of subject mater in geography, the pupil needs to have adequate background information to read the ensuing content. Vocabulary considerations thoroughly enter in to the reading act. The teacher then needs to develop readiness within learners for reading by printing the new words on the chalkboard in neat, manuscript style. These words should be printed within the context for reading the new content. Pupils may then see the relationship of the vocabulary terms with the rest of the words in the sentence. The teacher must assist pupils to focus attention carefully upon the words. Each needs to be pronounced, as a model, by the teacher as well as by pupils. The meaning of each new word might be discussed in context as well as in related meanings contained in the basal in which the selection will be read. By seeing the new words in print on the chalkboard, prior to reading the selection, pupils should identify each word in sequentially.

Meaningful learnings in reading makes it imperative for

learners to understand that which is and has been read. Thus if pupils are to read the word "equator," they need to be shown this concept on a globe and/or map. Meaning needs to be attached to why the "equator" is necessary information on a globe/map. This could take much time and is a developmental vocabulary term. Thus, the teacher may show this imaginary line to pupils. Pupils may have questions at this point which provide an excellent purpose for reading and that is to read to secure necessary answers. The questions can be written on the chalkboard for all to refer to as the reading activity commences (See Parker, 2001).

When reading silently, pupils will increasingly learn more about the equator. Perhaps, they read about the effect sunlight has when the sun is positioned directly overhead at noon at an equatorial area. The teacher may take a black sheet of construction paper and shine the light from a flashlight directly overhead at a 90 degree angle thereon. A second flashlight may be shown at a 45 degree angle on a second black sheet of construction paper. The height of each flashlight should be at the same elevation from the paper. Pupils soon realize that the 90 degree angle of light becomes much warmer as compared to the 45 degree angle. This can then be related to the sun being directly overhead in a 90 degree angle at the equator as compared to being at a 45 degree angle. Experiments and demonstrations using concrete materials of instruction should always be connected with the abstract vocabulary terms. Additional questions might also be answered by reading the related subject matter from the basal textbook (Ediger, 1996, 89-94).

Following the silent reading activity, pupils may discuss unanswered questions raised in the readiness for reading experiences. Perhaps, finding how many degrees north the local school is from the equator was a query. Here, the teacher may demonstrate how to measure degrees from the equator. Using a piece of string, the teacher may measure and discuss the distance in degrees by following a meridian. This distance may then be compared to the scale of miles or kilometers as given in the legend. On a Mercator map projection, a ruler may be used to measure since the lines of meridian are straight upward and downward. Later on, pupils may learn about the distortions on a Mercator map projection and make comparison with a model portrayal of the earth involving a globe, among other sequential learnings involving geography (Ediger, 2000, Chapter Fourteen).

Followup learnings for pupils from the reading activity, might include

1. reading a library book on the equator.
2. drawing an illustration with the equator placed thereon.
3. using play dough to indicate a model earth with a line included to show the equator.
4. finding out which agricultural crops grow in equatorial areas.
5. making an agricultural products map showing food products coming from these areas. The food products, in pictorial form or actual packaged empty containers, may be placed on a small table adjacent to the map. Colored string should connect the food product with its location on the map in equatorial areas of production (See Ediger, 1998, 59).

Reading Subject Matter With Understanding

A major problem for the teacher when pupils read geographical content is to develop meaning within pupils. Thus, pupils need to understand that which is taught, otherwise meaning in learning is lost. Sometimes, the writers of textbooks include too many new vocabulary terms in a single paragraph. One textbook had the following in one paragraph: equator, meridians, parallels, degrees of latitude and longitude, and the polar regions. It would take an entire unit of study of six weeks to assist learners to understand these geography vocabulary terms. The teacher may then needs to choose one of these concepts and engage in depth teaching therein, and then sequence these others as they relate most closely to the one being taught. The textbook will not have subject matter on all of these vocabulary terms in a few short paragraphs. Thus, each can be sequenced appropriately by the teacher.

Second, even if one new geographical concept, such as "parallels," is inherent in a reading selection, there might be other complex words in reading which cause identification and comprehension difficulties for the learner. There are several ways of handling this problem including

1. assisting pupils to use context clues in reading.
2. helping learners with the initial consonant sound and then using context clues.
3. dividing the unknown word into syllables in which that word then becomes familiar to the reader. For example, a word may look unfamiliar until a prefix and/or suffix is removed. The learner then notices that the unknown has so many familiar parts and can easily be blended into a recognizable whole.
4. saying the correct word to the stalled reader. Pupils need to read to obtain ideas and not be kept from reading a word

for longer than five seconds.

5. using peer reading whereby a peer helps others when word recognition problems arise.

6. emphasizing peer teaching in which a good reader assists the others in word identification, as needed (See Lipson and Wixson, 1991).

7. a peer reads aloud the subject matter to the less able so all can benefit from the reading activity. The less able may follow along in their textbooks and develop a larger sight vocabulary.

For each word not identified in reading, a pupil may print that word on a 3x4 inch card. These cards may then be filed in alphabetical order and practiced individually or within a small group setting. The goal is to master the correct identification of an increasing number of words. Pupils ideally should not be hindered in achieving objectives of instruction in geography due to reading difficulties. Thus, it is imperative that pupils become good readers who comprehend subject matter readily when encountering print discourse.

Using Concrete/Semi-concrete Materials in Teaching

Actual objects, models, and pictures need to be used in teaching geography. They assist pupils to make sense out of the abstract words read as well as those used in discussions. The reading and writing connection must receive more emphasis also when pupils understood that which has been learned. Then too, inquiry approaches in learnings are salient in helping pupils attach meaning to subject matter encountered. Thus in measuring degrees of longitude, the teacher might introduce these learnings contextually by having pupils look at a map in an ongoing lesson/unit of study and ask how distances are determined between two well known places such as Los Angeles and St. Louis. Pupils may locate these two cities on the map, clearly visible for all to see. It is good to get as much active pupil involvement, as possible, in teaching and learning situations. Hypotheses need to be developed here. It might be that a few pupils realize that the scale of miles listed on the map may be used to measure the distance. These pupils may then show how this is to be done. The teacher needs to reinforce this learning by clearly demonstrating how to measure distances between two points. A ratio of inches to miles should be used since this is more meaningful than centimeters to kilometers at this stage of learning. Readiness for learning indicates that pupils need to multiply inches times miles. How longitude affects time may also

be taught. Pupils need to perceive how every fifteen degrees of longitude, east or west, makes for one hour of difference in time. The map may show the time zones clearly for pupils to see and discuss. The teacher needs to sequence subject matter so that each pupil can understand what is being taught. If pupils bring into the discussion information on relatives who live in a different place and time zone than where the local school is located, then personal meanings are being attached to subject matter being acquired. As much as possible, the pupil needs to perceive relationships between himself/herself to ideas discussed. (See Joyce and Weil, 2000).

When pupils read subject matter pertaining to involvement of concrete and semiconcrete materials, interest in learning should be an end result. For example, if pupils are studying the Mississippi and Nile Rivers, they should have ample opportunities to view video-tapes, slides, and filmstrips on rivers. The concept of "rivers" may need to be differentiated from other bodies of water such as an ocean, lake, and tributary. The author prefers to use slides, if available for teaching, since the teacher may spend as much time as needed on any one slide. After living in the Middle East for two years and having made numerous return trips to that area of the world, slides on the Jordan River seemingly do capture pupil interest and attention for learning. Pupils may then ask questions desired about the Jordan River as they view it on the slide. However, selected pupils may prefer movement and motion in viewing the semiconcrete such as in a video-tape.

The teacher then needs to pay attention to learning styles possessed by individual pupils. Learning styles theory (See Dunn and Dunn, 1979) emphasizes under what conditions a pupil learns most. Thus, selected pupils may prefer increased teacher direction in learning as compared to others. Additional differences involve the degree of quietness desired in a classroom, the amount of concrete/semi-concrete materials wanted for learning as compared to the abstract, group versus individual endeavors, as well as a more formal as compared to an informal learning environment. For example, the teacher may arrange learning activities in geography whereby subject matter may be read and discussed in a small group as compared to a pupil reading the content individually and then working with others for indepth discussions. Approaches should be varied so that the learner who does prefer to work by the self has opportunities to work with others, as is done in societal endeavors. The same should be true of those who prefer to work with others; they should also work individually on vital tasks in

geography since doing things by the self is also important in society. individual as compared to committee work may be emphasized in each of he following learning opportunities:

1. make a relief map consisting of equal mixture of flour and salt with enough water added to form a thick mixture. The mixture is placed upon a piece of cardboard, large enough for all to work on and to show clearly the cities, nations or states, mountains, and hills being studied. A legend needs to be attached to show the meaning of each item on the relief map. Colored tempera paint may be used to show elevation features as indicated on the legend.
2. a large round balloon may be used to show the earth. The balloon should be covered with narrow strips of paper mache.' The soaked paper mache' should be dry before using tempera paint to show nations and cities, among other items being studied in maps and globes.
3. an oral report may be assimilated and given to classmates. Carefully developed standards should be used to assess the quality of the oral report. The report may pertain to what is manufactured within a region in the geography unit being studied.
4. a written report on farming methods used in the ongoing unit being studied dealing with geographical subject matter.
5. an outline may be developed covering subject matter read (Ediger,1990, 31-36).
6. charts may be made to summarize what was learned. In the chart, vocabulary terms may be listed with their definitions. Other charts may include population figures of areas studied, land forms illustrated and labeled, as well as a geological chart with its epochs and periods of time.
7. stamps collected of nations of the world arranged in a neat bulletin board display with a caption and classified in terms of nations or continents of origin.
8. a model map made showing the north and south polar regions, the equator, the Tropic of Cancer as well as the Tropic of Capricorn.
9. a collection of empty food containers brought to class and placed on a table. Colored yarn may be used to connect each food container with the place of origin of having been manufactured pinpointed on a map.
10. a chronological current events chart pertaining to what is being studied in ongoing lessons and units in geography (Ediger, 1998, 133-146).

Much reading is emphasized in each of the above named

activities along with a hands on approach in learning. Meaningful reading needs to be stressed in understanding of major and subordinate ideas. The five fundamental themes in geography need to be emphasized in content stressing geographical content. These are location, place, human-environmental system, movement, and regions (Geography Education Standards Project, 1997).

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